



NEW YORK WING, CIVIL AIR PATROL



AEROSPACE EDUCATION NEWSLETTER ONLINE

November - December 2020



Photo captions on last page

CONGRATULATIONS! - 2020 SQUADRON AE ACHIEVEMENT AWARD!



Squadron Aerospace Education
ACHIEVEMENT AWARD
FOR COMMENDABLE AE PROGRAMS PERFORMANCE

The **Squadron Aerospace Education Achievement Award** recognizes squadrons who have excelled in AE for the fiscal year. The following squadrons in the New York Wing were recognized in 2020 for completing the requirements. ***Congratulations to the AEOs and squadron commanders for organizing and implementing a well-balanced and impactful AE program. This is the award's second year; certificates will be mailed shortly.***

- NY-033 - PUTNAM COUNTY COMPOSITE SQDN
- NY-111 - NEWARK COMPOSITE SQDN
- NY-212 - CANANDAIGUA COMPOSITE SQDN
- NY-238 - COL JOHNNIE PANTANELLI COMPOSITE
- NY-253 - BATAVIA COMPOSITE SQDN
- NY-288 - LT. QUENTIN ROOSEVELT CADET SQDN
- NY-301 - PHOENIX COMPOSITE SQDN
- NY-351 - DUNKIRK COMPOSITE SQDN
- NY-387 - SULLIVAN COUNTY CADET SQDN
- NY-388 - JAMES P. OCONNOR COMPOSITE SQDN
- NY-406 - FORT DRUM COMPOSITE SQDN
- NY-417 - STALWART CADET SQDN
- NY-422 - LT ANTHONY L WILLSEA CADET SQDN

100% SUCCESS ! - ANNUAL AE ACTIVITY REPORT !

We are excited to report that all of the squadrons in the New York Wing completed and filed their 2020 AE Activity Reports. A special thank you to the AEOs and commanders who responded quickly and filed these important reports. Sharing this information and highlighting your activities, especially the "Above and Beyond," demonstrates your commitment to aerospace education and the impact CAP is having in furthering its AE mission. In the next issue we will provide a summary of these reports.

CAPR 50-1, ATT 2, 9 Nov 2020: REPORTING SCHEDULE

	2019-2020 AE Activity Report - FY 2020 ended 30 Sept (What you did - <i>history</i>)	2020-2021 AE Plan of Action - FY 2021 started 01 Oct (What you plan to do - <i>future</i>)
Group to Wing	30 November	N/A
Wing to Region	31 December	30 November
Region to NHQ	28 February	31 January



AE EDUCATOR 101

By Lt Col Anita Martin, Director Aerospace Education

Background: When the CAP School Program began, it typically was staffed with school educators who operated on a yearly curriculum. To assist the teachers, a school training plan was given to them when the school squadron was chartered. Today, that training plan is *available to all units* and is located on the CAP national website, in the Cadet Library. Go to: www.gocivilairpatrol.com/programs/cadets/library

This is a full 24-month plan to get through the first two leadership books (along with applicable leadership activities), all six AE Modules (also with applicable activities), model rocketry and AEX! We want to give you ways to extend your AE training to receive more credits for less work!

→→→ This is the **November/December** edition of ***Wing Tips*** and when you look at National's Squadron Training Plan for the 11th and 12th months, the lessons suggested are **Aerospace Dimensions 6.1 - Unmanned Spacecraft** and **Aerospace Dimensions 6.2 - Manned Spacecraft**. The Aerospace Dimensions Activity Six is **"How Does Motion Cause Disorientation?"** This activity is very similar to the AEX for Senior Members Activity Four, **"Build the Barany Chair"**. The Senior Activity explains more about the human body sensory and response systems. This Activity demonstrates that in space normal concepts of "up" and "down" no longer apply. Astronauts experience similar sensations of dizziness and

disorientation during their first few days in space. One year my cadets were able to obtain a barber chair for use as a Barany Chair. It was an entry in NYWG Ruth Nichols AE Display contest. Pilots were *very* interested to sit in the chair to experience the affect!

Once again, that's **ONE** CREDIT FOR DOING AEROSPACE DIMENSIONS activity and **ONE** FOR AEX CREDIT! ***Again, that's 2 Bangs for your Buck!!*** Stay tuned for the **January/February** Edition of Wing Tips for more exciting AE Educator 101 tips to get more "Bang for your buck"! ➔➔➔

AEROSPACE HISTORY

Celebrating the Achievements of the Past

Compiled by Maj Luis R. Ramos, Jr

The forgotten bomber, the B-18 Bolo Bomber , was the main US Army Corps bomber before the B-17, the B-24, and the B-25 became official bombers of the United States Army Corps and United States Army Air Force	<u>B-18 Bolo Bomber</u>
The Columbine II was the first aircraft designated as <i>Air Force One</i>	<u>The First Air Force One Flies Again</u> <u>The Incident that Created the First Air Force One</u>
The unique configuration of the B-52 , with the main wheels on the fuselage, allow this airplane to land or take off while facing a crosswind	<u>B-52 Crosswind Takeoff</u> <u>B-52 Crosswind Landing</u>

Share these videos with your squadron members and add them to your library of AE Resources!

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USING THE SQUADRON AEROSPACE EDUCATION ACHIEVEMENT AWARD AS YOUR PLAN OF ACTION (POA)

IAW CAPR 50-1, 9 Nov 2020, National HQ no longer requires *squadrons and groups* to submit a Plan of Action (POA). **The NYW AE staff still strongly recommends** that each squadron and group prepare its own POA to ensure you achieve your AE objectives *and* assess your results. *Developing a POA can sometimes be confusing so to spur you on the NYW AE staff has **endorsed the concept of using the Squadron Aerospace Education Achievement Award as your POA.***

In order to earn the Squadron AE Achievement Award, a squadron must perform eight of the tasks listed on the achievement award requirements in [CAPR 50-1, Att 5](#). The first four tasks are *required*, but the others vary between internal and external AE programs that provide each squadron with the flexibility to develop a balanced program that suits their needs and resources. **Set a goal for your**

squadron to earn the Squadron AE Achievement Award and your POA will follow.

This past year 13 squadrons achieved this recognition and 11 in 2019. **For 2021, the NYW has set a goal for 26 squadrons, double our 2020 number, to earn this award.** We are now working on a template that will provide a roadmap to help you achieve this goal. *Look for a separate email message within the next week for more details.*

This will also help the NYW achieve **OUR** own goal, to be recognized in 2021 by the Region Commander as the AE Wing of the Year. **Working together we can inspire our members on all things aerospace and further the CAP mission.**

LOGIC AND PUZZLE SECTION

From CAP Aerospace Mini - Book of Logic and Puzzles

By Lt Col Anita Martin, DAE

In each *Wing Tips* issue, we are providing you with a Critical Thinking Puzzle from the *Civil Air Patrol Aerospace Mini-book of Logic and Puzzles*. The Civil Air Patrol believes that "Critical Thinking" is a valuable skillset for leaders and it devotes a whole chapter to it in the LEARN TO LEAD: VOLUME TWO: TEAM LEADERSHIP, Ch 5: Brain Power for Leadership; Principles of Critical Thinking:

... critical thinking is the habit of being guided by universal values of logic and a deep respect for the truth. As with other aspects of leadership, becoming a critical thinker is more a journey than a destination. Everyone is subject to lazy thinking or irrational thought from time to time. Therefore, developing the ability to think critically is a lifelong endeavor, a never-ending process.

"[Critical thinking] is a desire to seek, patience to doubt, fondness to meditate, slowness to assert, readiness to consider, carefulness to dispose and set in order; and hatred of every kind of imposture." SIR FRANCIS BACON - *One of the first thinkers to use the scientific method.*

This issue's Critical Thinking puzzle is the "SPACE SHUTTLE WORDSEARCH"

This time we'd like to give you a change-of-pace puzzle. One that may be used for an AE class for the whole unit. Please enjoy.

OBJECTIVE: Challenge cadets and seniors with aerospace vocabulary

BACKGROUND: Aerospace science is a "language" all by itself. So often, it is assumed that everyone knows the "A,B,C's" of this fascinating technology, but that's not always true. Consider this example: A group of high school students were asked to define the word "rivets." The overwhelming majority answered . . . "it's the sound a frog makes." For that reason, and many others an activity like this has been presented to give AEOs a chance to make vocabulary interesting and fun.

MATERIALS AND PROCEDURE:

1. Copies of this "wordsearch" should be made available to each cadet in the squadron
2. Using a pen or pencil, they are to find and circle the words listed below
3. Once completed, the AEO can go over each word and cadets can discuss their meaning
4. This is a great exercise that can be completed ***virtually!!!***

FIND THESE WORDS:

ABORT
AIRLOCK
AIRPLANE
ALTITUDE
ASTRONAUT
BOOSTER

GALLEY
HOUSTON
IMPULSE
INTERTIA
LAUNCH
LIFTOFF

RENDEZVOUS
ROCKET
RUNWAY
SATELLITE
SHUTTLE
SPACE

CREW
EARTH
ELEVON
ENTERPRISE
FUEL

MENU
ORBITER
PAYLOAD
PILOT

STAR
TRAJECTORY
VELOCITY
WATER

WORDSEARCH PUZZLE - Have Fun!!



CREDITS: This "Wordsearch" was taken from Space Shuttle Activities for Intermediate Students, Aerospace Education Services Project, NASA Lewis Research Center (Now Glenn Research Center)

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AE DOWNLOADS & RESOURCES

<https://www.capnhq.gov/CAP.AEDownloads.Web/>

This is **Volume II** of the *recently* published **Women In Aviation (AEX) Activity Booklet**. Among the 13 women featured you will read about: Nicole Malachowski, Marta Bohn-Meyer, Sally Ride, Mae Jemison, Katherine Johnson. Included activities range from building a Soda Straw Cruise Missile, to a Mitsubishi U-2 aircraft (glider launched) and much more. Refresh your AEX program for the new year with WIA Vol II! This booklet also includes information for students on career paths in aviation.

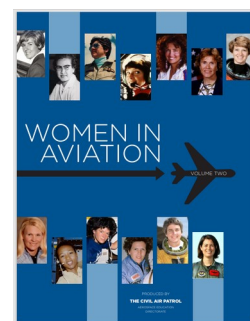




Photo (left) - The First Six Women Astronauts

CIVIL AIR PATROL AEOs - TO BE A PILOT, OR NOT TO BE

Capt Burt Dicht, NYW External AEO



During the **Rocky Mountain Region Virtual AEO School** an interesting question was asked by an AEO attending the school. She wanted to know if the CAP tracked how many AEOs were pilots. The answer was no, but the question started an interesting exchange as to whether being a pilot might make someone more qualified to be an AEO. That implication is not a hard leap to make as the CAP maintains the largest fleet of single engine Cessna aircraft in the world. Flying is an important part of CAP's operation and pilots are a critical component in carrying out one of CAP's missions.

Does that mean, however, that being a pilot is critical in carrying out another mission, aerospace education? A good place to start in answering that question is to understand CAP's aerospace education mission statement:

“Empowering members with opportunities and resources to promote aerospace-related STEM education and careers.”

As the mission statement indicates, CAP's aerospace education program is wide and deep, with more than 40 free, fun, and engaging programs, and it reflects the fact that aerospace is a vast field. The actual definition of “aerospace” (from Wikipedia) is “the human effort in science, engineering, and business to fly in the atmosphere of Earth (aeronautics) and surrounding space (astronautics).”



Using commercial aviation as a roadmap, we can explore what “aerospace” means. If you surveyed most people on the street about commercial aviation, they might indicate that pilots are the most important component. Certainly, pilots are the most visible and they are directly responsible for getting us safely from point A to point B. But singling out pilots ignores the definition that aerospace is the human effort in science, engineering, and business to fly. There is a lot more to commercial aviation than pilots.

Think about the science and engineering that went into designing the aircraft. How about the skilled workers who assembled the aircraft? Then the people responsible for testing the aircraft and making sure it was safe to fly. On the airline's side they had to assemble the financing and make the purchase. They then had people designing the routes the aircraft would fly. They need people to take reservations and handle all of the baggage. And of course, there are skilled engineers and mechanics who keep the planes flying. Let's also not forget the air traffic controllers who manage the airspace. You can see, commercial aviation is more than the pilots.

Many times, we make assumptions based only on what we see. You might have heard of the Iceberg Analogy. In reality, there is far more below the surface than what we see on the surface. Like the commercial aviation example, the CAP AE program is much more than just knowing how to fly an aircraft. With more than 40 different products and a range of activities that covers aircraft, rocketry, robotics, astronomy and much more, having a particular expertise might benefit you in one area, but there is so much more to know. If one feels a pilot is more qualified to be an AEO, an argument could be made that an engineer is just as qualified, since

many of the AE activities could be considered engineering based. Or perhaps a teacher might be best suited, as “educator” is in the title of the position and teachers understand how people learn.

The point of course is that the CAP AE program is not a “one size fits all” and effective AEOs come from all walks of life, with varied professional backgrounds and educations. That diversity enables each AEO to introduce their own creativity and innovation into the squadron’s program. **There are no pre-requisites or “must-have” qualifications to become an AEO and everyone is welcome!** Having served as an AEO at the squadron and group levels, and interacted with many AEOs, I have developed my own list of attributes that contribute to becoming an effective AEO. Let’s take a closer look:

Commitment: Taking on an AEO assignment means your squadron members are counting on you to conduct your annual programs and each activity. **Demonstrating your commitment to follow through on your responsibilities will ensure you are a successful AEO.**

Being Prepared: In a previous article I mentioned the importance of being prepared. CAP AE activities offer a wealth of information including background materials, lesson outcomes, a step-by-step how-to guide, and places to find out more information. **If you do a proper prep, including testing the activity on your own, you will be ready to conduct engaging successful activities.**

A Willingness to Learn: The CAP provides unique opportunities for professional growth through the specialty track program. **No experience is necessary to become an AEO, just the willingness and commitment to learn.** Take advantage of the Aerospace Specialty track and you can develop your knowledge and skills at your own pace while you are also doing your job. Make it a goal to eventually get your “Master” rating. Seek out mentors either in your squadron or at the group level. And research and study areas where you have a limited background. Today it’s very easy to learn.

Ability to Ask For Help: I’ve already described the diversity of CAP. **Take advantage and leverage that diversity by reaching out to senior members with skills beyond your own.** For example, if you are not a pilot and want to conduct activities related to flying, ask the pilots in your squadron to assist you. Or if you are conducting a session on astronomy, perhaps there are several amateur astronomers in your squadron. You get the idea. CAP is a community, and you will always be able to find a helping hand to enhance the program and your own knowledge.

Become a Public Speaker/Communicator: Being a pilot doesn’t mean you can explain the concepts of flight. Having experience as an engineer is not a guarantee you can describe engineering concepts to a lay audience. **The lesson here is that expertise in a subject does not translate into your audience learning from you.** There are many ways to improve your speaking and communication skills. One of the most effective approaches is to record yourself. Plan out your next lesson and conduct a practice run while you record the session. You will learn a great deal about your style just by watching yourself. Have your spouse or significant other critique it as well. Becoming an effective speaker takes work and practice.

Adapting Your Own Skills: Whether you are a pilot, engineer, or educator, you have the ability to apply your knowledge and skills to the AEO position. Perhaps you are a skilled artist, a great writer, a web designer, or an RC airplane enthusiast. Think about how you can use your own skills to enhance the AE program for the squadron. **Use your creativity to think beyond the lesson plans.** Being flexible and experimenting with what you know can keep things fresh and engaging.







The takeaway is that whether you bring aerospace experience or just an interest and passion to learn, you can be an effective Aerospace Education Officer. **Everyone is welcome, including pilots. Take the time to develop and pay attention to the attributes I described, and I have no doubt you will “fly.”**

RECOGNIZE YOUR COLLEAGUES AND ORGANIZATIONS!

(This earns points in the Squadron AE Achievement Award!)

Do you know an organization or a CAP member that made a significant contribution to aerospace education in the past year or over the course of their CAP career? Now is the time to consider nominating them for a CAP award. AE awards are a way to recognize the hard work and exceptional contributions of those that advance aerospace education. Any CAP member can nominate an organization or individual, but you must follow the prescribed process and forward it through the chain of command.

CAPR 50-1 & CAPP 50-1 describes the awards and the nomination process. Use **AE award forms** to complete your nomination packets and enter them into the electronic eServices under 'Award Recommendations'; prepare your nomination package in advance and prior to attempting the electronic entry; gather qualitative information – facts that illustrate what was accomplished; refer to CAP Pamphlet 39-3 for style, helpful language and phrases to clearly describe why your candidate deserves recognition. **CAP Form 120** is used *only as the cover sheet* for each award nomination. ***Below is a list of awards and the applicable form:***

 <p>FRANK G. BREWER CIVIL AIR PATROL</p> <p>MEMORIAL AEROSPACE AWARD</p>	<p>Frank G. Brewer CAP Memorial Aerospace Awards. The four award categories, nomination procedures, and the selection criteria for each are covered on the nomination form on:</p> <p>CAP Form 50-1 for Brewer Nominations:</p> <p>Category I, CAP Cadet Category II, CAP Senior Member Category III, Individual or Organization, non-member Category IV, Lifetime Achievement, CAP Member</p>
	<p>Maj Gen Jeanne M. Holm CAP AEO of the Year Award. More information about the qualifications and the nomination procedures can be found on CAP Form 50-2 and in CAPP 50-1.</p> <p>CAP Form 50-2 Holm Nomination: AEO of the Year</p>
	<p>CAP AE Teacher of the Year Award. More information about the qualifications and the nomination procedures can be found on CAP Form 50-3 and in CAPP 50-1.</p> <p>CAP Form 50-3 AE Teacher of the Year – an AEM or a CAP Member Certified Teacher</p>
	<p>Air Force Association's (AFA) AE Cadet of the Year Award. More information about qualifications and nomination procedures can be found on CAP Form 50-4 and in CAPP 50-1.</p> <p>CAP Form 50-4 AFA AE Cadet of the Year</p>

DEADLINES FOR AWARD

*Squadron to Group	15
December 2020*	
Group to Wing	15

January 2021	
Wing to Region	15
February 2021	
Region to NHQ	15 March
2021	

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For questions or comments about any of this issue's topics, please email:

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HELP WANTED!

**Newsletter Editor Wanted! Topics, How-To, Best Practices, Photos!
Please send your contributions to Lt Col Anita Martin:**

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But wait! There's more

**[https://www.gocivilairpatrol.com/programs/aerospace-education/
announcements](https://www.gocivilairpatrol.com/programs/aerospace-education/announcements)**

CAPTIONS FOR COVER PAGE PHOTOS:

Caption for left hand photo: *Cadets from Broomfield Composite Squadron launching model rockets.*

Caption for middle photo: *This is CAP5014, aka N185HS, a 1981 Cessna Skywagon A-185F currently assigned to the Alaska Wing.*

Caption for right hand photo: *AEO Capt Pat Healey with cadets from Doylestown Squadron 907, PA-146, flying a Quad Luggs quadcopter, one of the original CAP STEM kits. Capt Healey is now with SER-FL-173*

Final Thought:

Critical thinkers try to prevent prejudices and emotions from clouding their logic.

